Patent Claims

1. Lining for a vehicle roof (2) with an air-permeable support layer (3), which support layer (3) has a first air-permeable reinforcement layer (4) on the vehicle side and a second air-permeable reinforcement layer (5) on the passenger compartment side, the first reinforcement layer on the vehicle roof side having an air-impermeable back layer (9), the second reinforcement layer (5) being provided with an air-permeable decorative layer (6) on the passenger compartment side and the individual layers being bonded to each other with an air-permeable adhesive (7), characterised in that to make an acoustically optimisable and aesthetically-resistant vehicle rooflining, a semi-permeable and migration-resistant barrier layer (8) is provided between the second reinforcement layer (5) and the decorative layer (6).

2. Lining according to claim 1, characterised in that the layers on the passenger compartment side have an air flow resistance of $500 Nsm^{-3} < R1 < 2500\ Nsm^{-3}$, especially $900\ Nms^{-3} < R1 < 1900 Nsm^{-3}$.

3. Lining according to one of claims 1 or 2, characterised in that the air-permeable support layer (3) is made from a PU foam.

4. Lining according to one of claims 1 to 3, characterised in that the reinforcement layer (4) comprises a glass fibre layer.

5. Lining according to one of claims 1 to 4, characterised in that the barrier layer (8) consists of a mixed fibre fabric, weighing approximately 20 g/m$^2$ to 60 g/m$^2$ and especially a mixed fibre fabric weighing approximately 45 g/m2.

6. Lining according to Claim 5, characterised in that the barrier layer (8) contains chemically-bonded cellulose and polyester fibres.

7. Lining according to Claim 6, characterised in that the surface of the barrier layer is treated accordingly to achieve the required wetting properties.

8. Lining according to Claims 1 - 7, characterised in that the barrier layer (8) is migration-resistant to softeners, decomposition products used by ageing and / or additives from the PU foam layer or the adhesive films.

9. Lining according to Claims 1 to 8, characterised in that the barrier layer (8) has a thickness of 0.2 mm to 1.0 mm, especially 0.285 mm.

10. Lining according to Claims 1 to 9, characterised in that adhesive (7) is a conventional two-pack PU adhesive.

11. Lining according to one of Claims 1 to 10, characterised in that decorative layer (6) is an air-permeable PE non-woven fabric layer.

12. Method for making a vehicle rooflining according to Claim 1, characterised in that

(a) An air-impermeable back layer (9) is covered with first reinforcement fibres (11), especially glass fibres, and a support layer (3), especially a PU foam layer, is applied to the reinforcement fibres (11)

(b) The back layer (9), reinforcement fibres (11) and support layer (3) are impregnated jointly with a pre-determined quantity of a first component (12) of an adhesive (7) and to do this, are transported together through a bath (13) filled with this first component (12) and first squeezing rollers (14) disposed downline, for example.

(c) The support layer (3) impregnated in this way is covered with second reinforcement fibres (15), especially glass fibres, and then wetted, especially sprayed, with a second component (16) of the adhesive (7).

(d) A semi-permeable and migration-resistant barrier layer (8) is applied to the second reinforcement fibres (15) and is then pressed with the other layers (9, 11, 3, 15) with the aid of second squeezing rollers (17), for example, in order to allow the two adhesive components (12, 16) to react with each other, before a self-adhesive decorative layer (6) is applied to this barrier layer (8).

(e) The layers applied to each other in this way are then cut to size as required and hot shaped.